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CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

Bulletin 43.—May 29, 1880.

FERTILIZER ANALYSES.

CANADA ASHES.

400 Ashes from stock of W. W. Cooper, Suffield. Sent by R. E. Pinney, Suffield. Cost 35 cents per bushel of 42 pounds.	400	401
401 Canada Leached Ashes from stock of James A. Bill, sent by Otis Snow, Rockville. Cost 21 cents per bushel.		
Potash	4 66	1 26
Soda	1 20	54
Lime	34 02	24 37
Magnesia	2 41	2 43
Iron oxide and Alumina	1 41	3 13
Phosphoric acid	1 19	1 26
Sulphuric acid	95	10
Carbonic acid	19 25	14 99
Silica and Sand	11 11	15 71
Charcoal	6 86	3 11
Water at 100°	13 42	32 02
Combined water and loss	3 52	2 08
	100.00	100.00

Sample 400 is apparently unleached ashes and the analysis closely resembles in most particulars one made at this station last year on hickory ashes. The sample has evidently been exposed to wet and may have lost a portion of alkali. Reckoning in it the potash at 7 1-2 cents, lime at 1-4 cent (cost at kiln in New Haven), magnesia at 2 cents, phosphoric acid at 7 cents and sulphuric acid at 1-2 cent per pound, the estimated value of 100 pounds is \$0.57 1-2 while the cost is \$0 83. Allowing lime to be worth at Suffield 1-2 cent per pound, to cover transportation, would raise the valuation to \$0.66. On the other hand, considering the potash worth no more than in muriate (4 1-2 cents) would reduce the value 14 cents per 100 pounds. The ashes are really worth about 50 to 65 cents per 100 pounds, the former price for ordinary crops, the latter for tobacco where muriate of potash is objectionable. The valuation of fertilizers like this sample is less exact than in case of superphosphates, etc., because the ingredients like lime which make up a large part of its weight, have very variable commercial values, according to locality and state of market.

401 has essentially the composition usually found in leached wood ashes. It contains indeed more sand and silica than the average but also more potash, while lime and phosphoric acid are up to the average.

SUPERPHOSPHATES, ETC.

- 404 Lombard & Matthewson's superphosphate.
 410 Quinnipiac Fertilizer Co.'s superphosphate.
 411 Fish and Potash, manufactured by the Quinnipiac Fertilizer Co., New London.
 412 Pine Island Guano, manufactured by the Quinnipiac Fertilizer Co.
 415 Bradley's Superphosphate.
 404 sent by John D. Gaylord, Ashford. The others by S. R. Gridley, Pres. Farmer's Club, Bristol.
 410, 411, 412, from stock of S. A. Weldon & Son; 415 from stock of Wilcox & Judd.

	404	410	411	412	415
Nitrogen (organic)	3 61	3 22	4 52	4 79	3 06
Sol. Phos. Acid	5 10	1 26	1 27	92	7 48
Reverted "	8 15	6 88	3 78	5 57	87
Insoluble "	2 97	4 68	1 88	2 47	1 25
Potash (as muriate)		2 05	1 92	4 60	1 46
Estimated value per ton	\$44.83	\$36.81	\$32.42	\$39.09	\$35.57
Cost per ton	\$40.00	?	?	\$42.00	?
Estimated value per bag 100 lbs		\$1.84			\$1.78
Cost per bag		\$2.00			\$2.15
Estimated value per bag 167 lbs			\$2.70		
Cost per bag of 167 lbs			\$3.00		

The ton price of same brand as 410 (at New Haven) was given in Bulletin 39 as \$38; that of 411 as \$34, and that of 412 (in Bulletin 42) as \$40.

SPECIALS, BONE, COTTON SEED MEAL.

- 407 Stockbridge Manure for Corn., manufactured by Bowker & Co., N. Y., Boston and Rochester.
 409 Stockbridge Manure for roots, manufactured by Bowker & Co., N. Y., Boston and Rochester.
 413 Kitchen Garden Fertilizer, manufactured by Bowker & Co., N. Y., Boston and Rochester.

The above are from stock of S. A. Weldon & Son and were sent by S. R. Gridley, Pres. Bristol Farmers' Club.

- 405 Ground Bone, manufactured by Lombard & Matthewson. Sent by Jno. D. Gaylord, Ashford.
 406 Ground Bone, manufactured by Edmund Smith, South Canterbury, sent by B. Corbin, Fair Haven.
 402 Cotton Seed Meal, from stock of C. H. Carrington, Naugatuck, sent by M. S. Baldwin, Naugatuck.

	407	409	413	405	406	402
Nitrogen as ammonia	1.58	1.40				
Nitrogen in organic matter	3.13	2.70	2.98	4.05	4.08	6.89
Soluble phos acid	5.76	4.70	5.12			
Reverted "	84	1.16	74			
Insoluble "	42	68	35	21.08	20.99	3.49
Potash as muriate,	6.75	8.08	9.82			2.07
Calculated value per ton	\$40.70	\$39.16	\$35.38	\$40.15	\$39.39	\$36.94
Cost "	4.00†	5.00†	3.00†	\$32.00*	\$30.00*	\$30.00*

—†, per 200 lbs. † per 100 lbs. * per ton.

S. W. JOHNSON, Director.

